

OCT 10 2001

PTO/SB/08 (2-92)

Sheet 1 of 6

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 376462000400

Application Number 09/560,711

Applicant*

Benjamin FRYDMAN et al.

Filing Date April 27, 2000

Group Art Unit 1643

Mailing Date September 27, 2001

U.S. PATENT DOCUMENTS

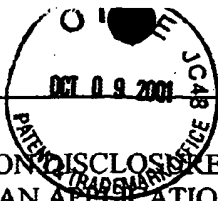
Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
PJB	1.	02/04/1997	S.I.R. H1,633	Hiebert et al.			
	2.	07/12/1977	4,035,174	Grier et al.			
	3.	05/30/1978	4,092,432	Björklund et al.			
	4.	05/08/1979	4,153,567	Kluger et al.			
	5.	01/01/1985	4,491,651	Naiman			
	6.	08/27/1985	4,537,601	Naiman			
	7.	05/20/1986	4,590,288	Klemann			
	8.	02/10/1987	4,642,344	Hajek et al.			
	9.	10/06/1987	4,698,446	Lai et al.			
	10.	06/19/1990	4,935,449	Bey et al.			
	11.	06/04/1991	5,021,409	Murrer et al.			
	12.	06/04/1991	5,021,571	Mease et al.			
	13.	06/08/1993	5,217,964	Edwards et al.			
	14.	10/11/1994	5,354,782	Edwards et al.			
	15.	12/20/1994	5,374,658	Lau			
	16.	03/28/1995	5,401,443	Nagano et al.			
	17.	05/09/1995	5,413,719	Sivakumar et al.			
	18.	06/18/1995	5,434,145	Edwards et al.			
	19.	03/12/1996	5,498,522	Porter			
	20.	05/14/1996	5,516,807	Hupe et al.			
	21.	07/30/1996	5,541,230	Basu et al.			
	22.	02/25/1997	5,606,053	Prashad et al.			
	23.	03/04/1997	5,607,574	Hart			
	24.	03/04/1997	5,608,061	Ciszewski et al.			
	25.	03/18/1997	5,612,478	Xu et al.			
	26.	07/08/1997	5,646,188	Gilad et al.			
	27.	08/05/1997	5,654,287	Prakash et al.			

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Applicant

Benjamin FRYDMAN et al.

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BJD	28.	09/30/1997	5,672,202	Stirling et al.			
	29.	10/14/1997	5,677,349	Gilad et al.			
	30.	10/14/1997	5,677,350	Frydman			
	31.	10/28/1997	5,681,837	Bergeron			
	32.	01/13/1998	5,707,532	Guerro et al.			
	33.	04/28/1998	5,744,453	Mintz et al.			
	34.	06/09/1998	5,763,388	Lightsey et al.			
	35.	12/01/1998	5,843,959	Bergeron, Jr.			
	36.	03/09/1999	5,880,161	Basu et al.			
	37.	03/30/1999	5,889,061	Frydman et al.			
	38.	10/05/1999	5,962,533	Bergeron Jr.			
	39.	08/08/2000	6,100,430	Yamamoto et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
BJD	40.	05/22/1969	DE 1295826	Germany			Abstract
	41.	02/09/1993	JP 05-032902	Japan			Abstract
	42.	10/24/1995	JP 07-277964	Japan			Abstract
	43.	07/06/1995	WO 95/18091	PCT			
	44.	08/01/1996	WO 96/22962	PCT			
	45.	12/19/1996	WO 96/40096	PCT			
	46.	01/23/1997	WO 97/02027	PCT			
	47.	04/30/1998	WO 98/17624	PCT			
	48.	07/30/1998	WO 98/32729	PCT			Abstract
	49.	11/09/2000	WO 00/66587	PCT			

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
BJD	50.	Alfonso, I. et al., (1996) "Sequential biocatalytic resolution of (+)-trans-cyclohexane-1,2-diamine. Chemoenzymic synthesis of an optically active polyamine" <i>Chem. Commun.</i> 21:2471-

EXAMINER:

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Applicant

Benjamin FRYDMAN et al.

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Group Art Unit 1643

Mailing Date September 27, 2001

		2472.
b o o	51.	Bachrach, U. et al. (1971). "Antivirus Action of Acrolein, Glutaraldehyde and Oxidized Spermine" <i>J. Gen. Virol.</i> 13(3):415-422.
	52.	Bachrach, U. et al. (1971). "Inactivation of Myxoviruses by Oxidized Polyamines" <i>J. Gen. Virol.</i> 11(1):1-9.
	53.	Bachrach, U. et al. (1972). "Effect of Oxidized Spermine and Other Aldehydes on the Infectivity of Vaccinia Virus" <i>Appl. Microbiol.</i> 23(2):232-235.
	54.	Basu, H.S. et al. (1990). "Effects of Variation in the Structure of Spermine on the Association with DNA and the Induction of DNA Conformational Changes" <i>Biochem. J.</i> 269(2):329-334.
	55.	Behe, M. et al. (1981). "Effects of Methylation on a Synthetic Polynucleotide: the B-Z Transition in Poly(dG-m5dC).Poly(dG-m5dC)" <i>Proc. Natl. Acad. Sci. USA</i> 78(3):1619-1623.
	56.	Berchtold, C.M. et al. (1998). "Inhibition of Cell Growth in CaCO2 Cells by the Polyamine Analogue N1,N12-Bis(Ethyl)Spermine is Preceded by a Reduction in MYC Oncoprotein Levels" <i>Journal of Cellular Physiology</i> 174(3):380-386.
	57.	Bernacki, R.J. et al. (1992). "Antitumor Activity of N,N'-Bis(Ethyl)Spermine Homologues Against Human MALME-3 Melanoma Xenografts" <i>Cancer Research</i> 52(9):2424-2430.
	58.	Bloomfield, V.A. and Wilson, R. W. (1981). <u>Chapter 10: Interactions of Polyamine with Polynucleotide</u> in <u>Volume 8: Polyamines in Biology and Medicine</u> . Morris et al., Eds., Dekker, New York, pp. 184-206.
	59.	Byers, T.L. and Pegg A.E. (1990). "Regulation of Polyamine Transport in Chinese Hamster Ovary Cells" <i>Journal of Cellular Physiology</i> 143(3):460-467.
	60.	Chang, B.K. et al. (1992). "Antitumor Effects of N-Alkylated Polyamine Analogues in Human Pancreatic Adenocarcinoma Models" <i>Cancer Chemother. Pharmacol.</i> 30(3):179-182.
	61.	Chang, B.K. et al. (1992). "Regulatory and Antiproliferative Effects of N-Alkylated Polyamine Analogues in Human and Hamster Pancreatic Adenocarcinoma Cell Lines" <i>Cancer Chemother. Pharmacol.</i> 30(3):183-188.
	62.	Chang, B.K. et al. (1993). "Effects of Diethyl Spermine Analogues in Human Bladder Cancer Cell Lines in Culture" <i>Journal of Urology</i> 150(4):1293-1297.
	63.	Davidson, N.E. et al. (1993). "Growth Inhibition of Hormone-Responsive and -Resistant Human Breast Cancer Cells in Culture by N ¹ , N ¹² -Bis(Ethyl)Spermine ¹ " <i>Cancer Research</i> 53(9):2071-2075.
	64.	Fernandez, C.O. et al. (1994). "Interactions Between Polyamine Analogs with Antiproliferative Effects and tRNA: a ¹⁵ N NMR Analysis" <i>Cell Mol. Biol.</i> 40(7): 933-944.
	65.	Feuerstein, B.G. et al. (1991). "Implications and Concepts of Polyamine-Nucleic Acid Interactions" <i>Journal of Cellular Biochemistry</i> 46(1):37-47.
	66.	Fischer, H.A., (1975) "Synthesis of ³ H-spermine" <i>J. Labelled Compd.</i> 11(1):141-143.

EXAMINER:

DATE CONSIDERED:

2/6/03

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Benjamin FRYDMAN et al.

Filing Date April 27, 2000

Group Art Unit 1643

Mailing Date September 27, 2001

67.	Frydman, B. and Valasinas, A. (1999). "Polyamine-based chemotherapy of cancer," <i>Opin. Ther. Patents</i> 9(8):1055-1068.
68.	Frydman, L. et al. (1992). "Interactions Between Natural Polyamines and tRNA: an ¹⁵ N NMR Analysis" <i>Proc. Natl. Acad. Sci. USA</i> 89(19):9186-9190.
69.	Gosule, L.C. and Schellman J. A. (1978). "DNA Condensation with Polyamines I. Spectroscopic Studies" <i>J. Mol. Biol.</i> 121(3):311-326.
70.	Goto, M. et al., (1969) "Stereochemical studies of metal chelates. III. Preparation and stereochemistry of cobalt (III) complexes with C-substituted triethylenetetramines at the central ethylenediamine bridge" <i>Inorg. Chem.</i> 8(2):358-366.
71.	Hafner, E.W. et al. (1979). "Mutants of Escherichia Coli that do not Contain 1,4-Diaminobutane (Putrescine) or Spermidine" <i>J. Biol. Chem.</i> 254(24):12419-12426.
72.	Herr, H.W. et al. (1984). "Potentiation of Methylglyoxal-Bis-Guanyldrazone by Alpha-Difluoromethylornithine in Rat Prostate Cancer" <i>Cancer</i> 53(6):1294-1298.
73.	Horoszewicz, J.S. et al. (1983). "LNCaP Model of Human Prostatic Carcinoma" <i>Cancer Res.</i> 43(4):1809-1818.
74.	Igarashi, K. et al. (1990). "Spermine-Like Functions of N ¹ , N ¹² -Bis(Ethyl)Spermine: Stimulation of Protein Synthesis and Cell Growth and Inhibition of Gastric Ulceration" <i>Biochemical and Biophysical Research Communications</i> 172(2):715-720.
75.	Jain, S. et al. (1989). "Base Only Binding of Spermine in the Deep Groove of the A-DNA Octamer d(GTGTACAC)" <i>Biochemistry</i> 28(6):2360-2364.
76.	Janne, J. et al. (1978). "Polyamines in Rapid Growth and Cancer" <i>Biochimica et Biophysica Acta</i> 473(3-4):241-293.
77.	Jeffers, L. et al. (1997). "Effects of the Polyamine Analogues BE-4-4-4-4, BE-3-7-3, and BE-3-3-3 on the Proliferation of Three Prostate Cancer Cell Lines" <i>Cancer Chemother Pharmacol</i> 40(2):172-179.
78.	Kobiro, K. et al., (1992) "Synthesis and molecular structures of nickel (II) alkyl-substituted cyclam complexes" <i>Inorg. Chem.</i> 31(4):676-685.
79.	Kramer, D. et al. (1995). "Stable Amplification of the S-Adenosylmethionine Decarboxylase Gene in Chinese Hamster Ovary Cells" <i>Journal of Biological Chemistry</i> 270(5):2124-2132.
80.	Kramer, D.L. et al. (1993). "Regulation of Polyamine Transport by Polyamines and Polyamine Analogs" <i>Journal of Cellular Physiology</i> 155(2):399-407.
81.	Kramer, D.L. et al. (1997). "Effects of Novel Spermine Analogues on Cell Cycle Progression and Apoptosis in MALME-3M Human Melanoma Cells," <i>Cancer Research</i> 57:5521-5527.
82.	Lovaas, E. (1997). "Antioxidative and Metal-Chelating Effects of Polyamines" <i>Advances in Pharmacology</i> 38:119-149.
83.	Mamont, P.S. et al. (1978). "Anti-Proliferative Properties of DL-Alpha-Difluoromethyl Ornithine in Cultured Cells. A Consequence of the Irreversible Inhibition of Ornithine

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INFORMATION DISCLOSURE CITATION
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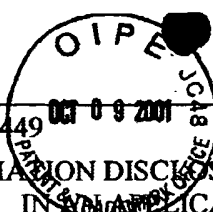
		Decarboxylase" <i>Biochem. Biophys. Res. Commun.</i> 81(1):58-66.
Bjb	84.	Marton, L.J. and Pegg A. E. (1995). "Polyamines as Targets for Therapeutic Intervention" <i>Annu. Rev. Pharm. Toxicol.</i> 35:55-91.
	85.	Mi et al. (1988) "Human prostatic carcinoma cell lines display altered regulation of polyamine transport in response to polyamine analogs and inhibitors," <i>The Prostate</i> 34:51-60.
	86.	Morgan, D.M.L. and Christensen J. (1983) "Polyamine Oxidation and the Killing of Intracellular Parasites." <i>Adv. Polyamine Res.</i> 4: 169-174.
	87.	Morgan, D.M. (1998). Chapter 1: Polyamines. <i>An Introduction in Methods. Mol. Biol.</i> , Morgan D., ed., Humana Press Inc., New Jersey, vol. 79, pp. 3-30.
	88.	Morgan, D.M. et al. (1986). "The Effect of Purified Aminoaldehydes Produced by Polyamine Oxidation on the Development in Vitro of Plasmodium Falciparum in Normal and Glucose-6-Phosphate-Dehydrogenase-Deficient Erythrocytes" <i>Biochem. J.</i> 236(1):97-101.
	89.	Nagarajan, S. et al., (1987) "Chemistry of naturally occurring polyamines. 11. Unsaturated spermidine and spermine derivatives" <i>J. Org. Chem.</i> 52(22):5044-5046.
	90.	Nishimura, K. et al. (1971). "Phagocidal Effects of Acrolein" <i>Biochim. Biophys. Acta</i> 247(1):153-156.
	91.	Pegg, A.E. and McCann P. P. (1982). "Polyamine Metabolism and Function" <i>Am. J. Cell. Physiol.</i> 243(5):C212-C221.
	92.	Pohjanpelto et al. (1981). "Polyamine starvation causes disappearance of actin filaments and microtubules in polyamine-auxotrophic CHO cells," <i>Nature</i> 293:475-477.
	93.	Porter, C.W. et al. (1987). "Relative Abilities of Bis(ethyl) Derivatives of Putrescine, Spermidine, and Spermine to Regulate Polyamine Biosynthesis and Inhibit L1210 Leukemia Cell Growth" <i>Cancer Res.</i> 47(11):2821-2825.
	94.	Porter, C.W. and Bergeron, R. J. (1988). "Enzyme Regulation as an Approach to Interference with Polyamine Biosynthesis--An Alternative to Enzyme Inhibition" <i>Advances in Enzyme Regulation</i> 27:57-79.
	95.	Porter, C.W. and Bergeron, R. J. (1988). "Regulation of Polyamine Biosynthetic Activity by Spermidine and Spermine Analogs--A Novel Antiproliferative Strategy" <i>Adv. Exp. Med. Biol.</i> 250:677-690.
	96.	Porter, C.W. et al. (1991). "Correlations Between Polyamine Analogue-induced Increases in Spermidine/Spermine N ¹ -Acetyltransferase Activity, Polyamine Pool Depletion, and Growth Inhibition in Human Melanoma Cell Lines" <i>Cancer Res.</i> 51(14):3715-3720.
	97.	Reddy, V. K. (1998). "Conformationally restricted analogues of ¹ N, ¹² N-bisethylspermine: Synthesis and growth inhibitory effects on human tumor cell lines," <i>J. Med. Chem.</i> 41:4723-4732.
	98.	Redgate, E.S. et al. (1995). "Polyamines in Brain Tumor Therapy" <i>J. Neuro-Oncol.</i> 25(2):167-179.

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Docket Number 376462000400	Application Number 09/560,711
Applicant Benjamin FRYDMAN et al.	
Filing Date April 27, 2000	Group Art Unit 1643
Mailing Date September 27, 2001	

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99.	Shappell, N.W. et al. (1992). "Differential Effects of the Spermine Analog, N ¹ , N ¹² -Bis(ethyl)-spermine, on Polyamine Metabolism and Cell Growth in Human Melanoma Cell Lines and Melanocytes" <i>Anticancer Research</i> 12(4):1083-1089.
100.	Snyder, R. D. et al., (1991) "Effects of polyamine analogs on the extent and fidelity of in vitro polypeptide synthesis" <i>Biochem. Biophys. Res. Commun.</i> 176(3):1383-1392.
101.	Snyder, R.D. et al. (1994). "Anti-Mitochondrial Effects of Bisethyl Polyamines in Mammalian Cells" <i>Anticancer Res.</i> 14(2A):347-356.
102.	Wunz, T.P. et al., (1987) "New antitumor agents containing the anthracene nucleus" <i>J. Med. Chem.</i> 30(8):1313-1321.
103.	Yuan, Z.M. et al. (1994). "Cytotoxic Activity of N1- and N8-Aziridiny Analogs of Spermidine" <i>Biochemical Pharmacology</i> 47(9):1587-1592.
104.	Zagaja, G.P. et al. (1998). "Effects of Polyamine Analogues on Prostatic Adenocarcinoma Cells in Vitro and in Vivo" <i>Cancer Chem. Pharm.</i> 41(6):505-512.

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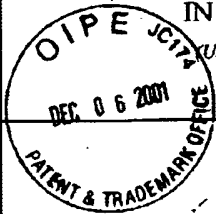
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B JB	1.	09/04/1997	WO 97/31611 A2, A3	WIPO	/	/	
B JB	2.	11/09/2000	WO 00/66175 A2	WIPO	/	/	

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Benjamin FRYDMAN et al.

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Group Art Unit 1621

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BJD	1.	05/06/1999	WO 99/21542 A2, A3	WIPO			
BJD	2.	10/28/1999	WO 99/54283 A1	WIPO			

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